

In a two-step spacer fabrication process for a non-volatile memory device, a thin oxide layer is deposited on a wafer substrate leaving a gap in the core of the non-volatile memory device. Implantation and/or oxide-nitride-oxide removal can be accomplished through this gap. After implantation, a second spacer is deposited. After the second spacer deposition, a periphery spacer etch is performed. By the above method, a spacer is formed.

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